

REMARKS

Reconsideration of the application is requested in view of the above amendments and the following remarks. Claims 1, 10, 12 and 22 have been amended. New claims 23-28 have been added. The amendments to claims 1, 10 and 22 have been made to address formality issues only. The amendments to claim 12 are supported by at least Figures 4a and 4b of the present application. New claims 23-28 are supported by at least claims 1 and 12 and Figure 3a of the present application. No new matter has been added.

Priority

The priority claim at page 1, first paragraph of the present application has been revised to clarify that the present application claims priority to U.S. Patent Application Serial No. 09/669,060, and application 09/669,060 claims priority to U.S. Provisional Application No. 60/155,611.

Information Disclosure Statement

Enclosed herewith are English abstracts for foreign references DE29701758 and FR2678508, which should satisfy 37 C.F.R. §1.98(a)(3).

Copies of the new foreign references and nonpatent literature documents cited in Applicant's IDS and which were not cited in the parent application are included herewith. A listing of these new references is included on the attached PTO Form 1449.

Objections and §112 Rejections

The specification and claim 12 have been amended as suggested by the Examiner at pages 3-4 of the Office Action.

Claims 1, 3, 9-11 and 22 were rejected under 35 U.S.C. §112, second paragraph as being indefinite. Claims 1 and 10 have been amended and are now definite.

§103 Rejections

Claims 1, 3, 9-11 and 22 were rejected under 35 U.S.C. §103(a) as being unpatentable over Von Oepen (U.S. 6,048,361) in view of Jang (U.S. 5,749,848). Applicants respectfully traverse this rejection.

Von Oepen discloses a stent delivery system that includes a stent having a side opening 22 along a length of the stent. Von Oepen fails to disclose or suggest the use of an ultrasound transducer.

Jang discloses a catheter system that includes an ultrasound device 75 fixed to a distal end of a drive shaft 45. The ultrasound device 75 is advanced through a balloon 65 and prosthetic device 90 (e.g., stent or prosthesis) where the device 75 is used to provide images of one or both of the proximal and distal ends of the prosthetic device 90 to ensure that the prosthesis is positioned at a desired location away from a branching segment of the blood vessel and overlapping with healthy segments of the vessel at both ends of the prosthetic device 90. The imaging device 75 is also used to determine a diameter of the expanded prosthetic device 90 to ensure that the expanded form is maintained sufficiently large after recoil.

Von Oepen and Jang, alone or in combination, fail to disclose or suggest an ultrasound transducer “positioned for transmitting and receiving ultrasound signals through said side hole” of the stent, as required by claim 1. Jang discloses only the imaging of proximal and distal ends of the prosthesis 65. Jang fails to disclose or suggest imaging along a length of the prosthesis 90 for purposes other than determining an internal diameter of the prosthesis 90 in the expanded state. Jang also clearly fails to disclose or suggest imaging through a defined side hole of the prosthesis 90.

Furthermore, Jang specifically discloses the use of an ultrasonic device for positioning the prosthesis 90 at a longitudinal position that is *not covering* an opening into a branch vessel. Jang fails to disclose or suggest the use of ultrasonic imaging for aligning a feature of the prosthesis (e.g., a side opening of a stent) with the opening into the branch vessel, thus *covering* the branch vessel opening with the prosthesis. Therefore, Von Oepen and Jang fail to disclose or suggest “an ultrasound transducer . . . positioned for transmitting and receiving ultrasound

signals through said side holes such that both a longitudinal and radial position of an ostium of a branch vessel of said body lumen is determined in relation to said side hole,” as required by claim 1.

Applicants submit that Von Oepen and Jang fail to disclose or suggest every limitation of claim 1 and the claims that depend from it.

Claim 12 was rejected under 35 U.S.C. §103(a) as being unpatentable over Von Oepen in view of Jang and Solomon (U.S. 5,846,204). Applicants respectfully traverse this rejection.

Von Oepen and Jang fail to disclose or suggest an ultrasound transducer housing. The ultrasound housing 104 disclosed by Solomon does not include a passage that extends through the housing 104. The Office Action asserts that the sleeve 108 connected to the transducer housing 104 is part of the housing and meets the limitation of “a passage through said housing between said distal and proximal ends,” as required by claim 12. Applicants respectfully traverse this assertion. However, in an effort to more clearly distinguish the ultrasound transducer housing of claim 12 from the sleeve 108 disclosed by Solomon, claim 12 has been amended to recite “a passage extending along a central axis of said housing.” The sleeve 108 disclosed by Solomon is positioned on an outer side of the housing 104. The sleeve 108 defines a guidewire passage 114 that is not aligned along a central axis housing 104. Therefore, Solomon fails to disclose or suggest, alone or in combination with Jang and Von Oepen, every limitation of claim 12.

New Claims

New claims 23-28 have been added. Applicants submit that the prior art of record fails to disclose or suggest every limitation of claims 23-28. The prior art of record fails to disclose or suggest at least the use of an ultrasonic transducer to send signals through a side opening of a stent for purposes of aligning the side opening with an ostium of a branch vessel of a vessel bifurcation. Consideration and allowance of new claims 23-28 is respectfully requested.

In view of the above, Applicants request reconsideration of the application in the form of a Notice of Allowance. If a telephone conference would be helpful in resolving any further issues related to this matter, please contact Applicants attorney listed below at 612.371.5387.

Respectfully submitted,



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A handwritten signature in dark ink, appearing to read "Joshua N. Randall". The signature is written over a horizontal line.

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